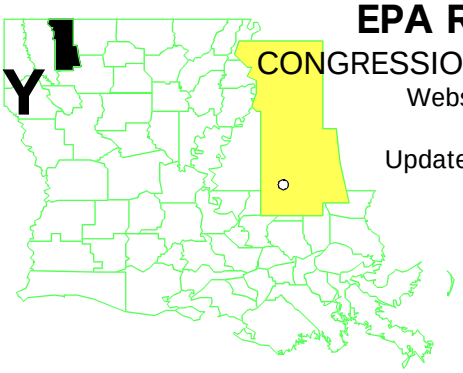
LOUISIANA ARMY AMMUNITION PLANT

LOUISIANA

EPA ID# LA0213820533



EPA REGION 6

CONGRESSIONAL DISTRICT 04

Webster Parish

Updated 06/20/00

Site Description

Location: ! South of Interstate Highway 20 in Bossier and Webster Parishes, 22 miles east of Shreveport.

Population: ! Approximately 10,250 people live in this predominantly agricultural area, within 2 miles of the site.

Setting: ! The closest drinking water well is a distance of 1,968 feet from the site boundaries.
! The initial Hazard Ranking System ranking was based on 16 one-acre pink water lagoons known as Area P. The total installation was listed on the National Priorities List and covers 14,974 acres of level to slightly rolling forest land near the towns of Minden and Doyline.

Hydrology: ! The Terrace aquifer lies approximately 20 feet below land surface and is reportedly used for drinking water in surrounding areas. Water supplies on the facility are provided by the 300 foot sands of the Wilcox aquifer.
! Analytical tests performed to date show that no contamination of the area drinking water wells has occurred, and that contamination has not migrated from the shallow aquifers to the deeper aquifers.
! Migration of the waste appears to be retarded in the vertical direction by the Cane River Formation. The Cane River forms a lower hydrogeologic boundary to the Terrace Aquifer and an upper confining unit for the Wilcox Aquifer across most of the installation.
! The updated Remedial Investigation, however, showed that the Cane River pinches out west of Area P, location of the pink water lagoons. This creates a situation where the upper Terrace deposits lay directly on top of the Wilcox formation. Thus, a possible hydrogeologic connection between the contaminated Terrace aquifer and deeper Wilcox aquifer does exist.
! The Army contends that a Corps of Engineers study shows that no real connection exists because the deeper aquifers of the Wilcox are overlain by substantial clay members of this same formation.

Wastes and Volumes

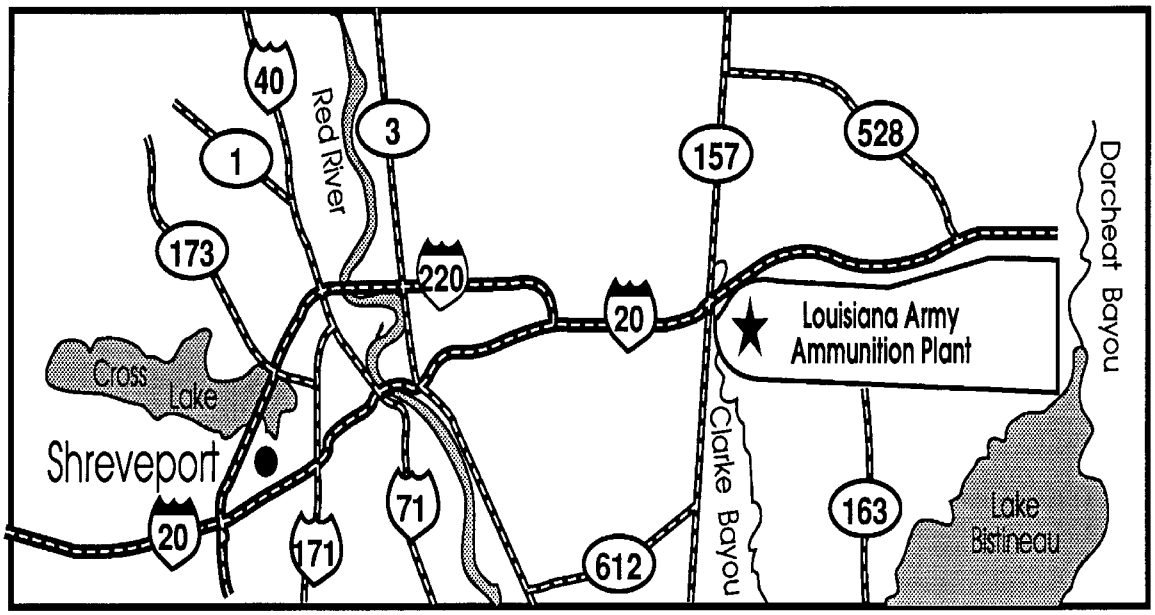
! The shallow ground water is contaminated by explosive wastes including the explosives, cyclotrimethylenenitramine (RDX) up to 27,000 parts per billion (ppb) and trinitrotoluene (TNT) up to 25,000 ppb.

! The Army incinerated 150,000 tons of explosive contaminated soils and sludges from Area P. Contaminated soils from other operable units have been addressed in the Feasibility Study for the first 7 study areas. Site investigation is on-going for soil contamination at both Y-line and the load lines and test areas. The most likely potential contaminants include volatiles, explosive compounds and heavy metals. Groundwater is being investigated as a separate operable unit for the same potential contaminants of concern.

Site Assessment and Ranking

NPL LISTING HISTORY
Site HRS Score: 30.60
Proposed Date: 10/15/84
Final Date: 3/31/89
NPL Update: No. 2

Site Map and Diagram



The Remediation Process

Site History:

! The plant began producing explosives in 1942. Several contractors have operated the facility. The most recent contractor was Thiokol Corporation. Currently the site is in standby and is occupied by minimum Army personnel.
! The Phase I investigation was completed by the Army in May 1978.
! The Phase II, Stage 1 investigation was completed in September 1982.
! A preliminary Remedial Investigation (RI) for ground water was completed in January 1987.
! Remedial Investigation/Feasibility Study (RI/FS) for soil contamination in Area P was completed in August 1987.
! EPA and Army agreed on a schedule for completion of the ground water RI/FS for Area P in April 1989. An updated RI was completed in 1991 and the Feasibility Study (FS) for ground water was completed in 1993. It was determined that groundwater will be addressed for the whole site as a separate operable unit (OU 5).
! An Interim Response Action (IRA) which consisted of incineration of contaminated soils and sludges from Area P was completed in early April 1990. The initial IRA work plan required the Army to excavate the lagoons to a depth of five feet. If soil contamination in the lagoons was greater than 500 ppm of total nitro bodies, the Army would continue to excavate in one foot increments until the soil contamination was 500 ppm or less of total nitro. The excavated soils and sludges were incinerated on site with the resulting clean ash to be placed back into the lagoons.
! The original schedule submitted by the Army showed that the IRA would be completed in August of 1990. However, the Army informed the EPA that investigations taking place at that time showed that the contamination of Area P was not as extensive as originally stated. The Army formally requested on October 26, 1989, that the cleanup criteria be revised to reflect a lesser amount of soils and sludges to be excavated and incinerated. The EPA, in conjunction with the Louisiana Department of Environmental Quality, reviewed this request. EPA approved this change to the cleanup criteria on December 21, 1989. The new cleanup criteria required that the lagoon in Area P be excavated to 100 ppm total explosives. The average depth of excavation was between two and three feet based upon this requirement. The excavation and incineration at Area P was completed in April 1990. Capping of the lagoons in Area P was completed by October 1990. Operation and maintenance of the area is ongoing.
! The RI and Risk Assessment was approved by EPA on March 23, 1992, for the seven soil/source study areas (Area P, Burning Ground 8 Landfill/Lagoon, Burning Ground 5, Landfill 3, Oily Waste Landfill and M-4 Lagoon). Ground water was put into a separate operable unit to include ground water from all 20 areas under consideration (site wide).
! The Proposed Plan of No Further Remedial Action Required for the Seven Soil/Source Study Areas was completed in November 1995.
! A public meeting was held in January 1996 to present the Proposed Plan for the Soil/Source Study Areas.
! A Draft RI was submitted for Y-Line in November 1994.
! Draft RI/FS Work Plan for 12 new areas, including C-Line and the other Load/Assemble/Pack lines and three test areas, was submitted in December 1994. This plan was revised and resubmitted in March 1995 , then finalized in November1995, when the field work began.
! The draft RI/FS Report for the Y-Line Chromium Etching Facility was submitted in June 1996.
! The Record of Decision (ROD) for the seven soil/source study areas was signed by the EPA

Regional Administrator in March 1997.

! A document entitled "Data Evaluation Report for the Groundwater Operable Unit" was submitted to EPA for review in March 1997. According to the Army, the objectives of this report were to present a compilation of all previously gathered groundwater data, to present a conceptual model of the hydrogeologic model, to review available groundwater quality data and to identify data gaps and issues. The data gaps identified are to be incorporated as part of the groundwater RI workplan due July 1997.

! The Remedial Investigation Report for Y-Line was completed in May 1998 and a Draft Proposed Plan recommending No Further Remedial Action Required was submitted in June 1998.

! A draft Ground Water Work Plan was submitted in April 1998 and was finalized in August. The implementation of the Work Plan began in September 1998 and is anticipated to be completed by December 1998.

! EPA's comments on the Human Health Risk Assessment for Line C were submitted in August 1998. The Screening-Level Ecological Risk Assessment for Line C was submitted to EPA in September 1998.

! The revised Ecological Risk Assessment for Line C was received in February 1999.

! EPA sent the Army their comments on the Proposed Plan for Y-Line in March 1999.

! The revised Human Health Risk Assessment for Line C was received in March 1999.

! A public meeting to present the Proposed Plan for Y-Line to the community was conducted on June 3, 1999. No public attended and no public comments were received during the public comment period that was from mid-May through mid-June of 1999.

! EPA reviewed and commented on the Follow-on RI/FS Work Plan for the Soils in the Load/Assemble/Pack and Test Areas at the end of September 1999.

! The Army submitted a draft no further remedial action ROD for Y-Line in October 1999. EPA reviewed the ROD and submitted comments in November 1999.

! A Record of Decision (ROD) has been prepared for the Y-Line Chromium Etch facility. The ROD recommends that no further remedial action is required based upon the human health and ecological risk assessments which showed that there was acceptable risk if no action were taken. There were no comments on the Proposed Plan and no community interest at the Public Meeting which was held in June 1999. The ROD was signed by EPA by May 19, 2000.

! The Army submits a draft Five-Year Review Report for Area P in May 2000.

Health Considerations:

! Shallow contaminated aquifer is hydraulically connected with the deep Wilcox aquifer used by the facility as a potable water supply.

Other Environmental Risks:

! Some residents in the surrounding areas may use the shallow ground water for drinking.

Record of Decision

Signed: Interim Response Action - 01/31/89, Area P only.
Approved with signatures on Federal Facility Agreement (FFA)

ROD-OU2
Signed: March 4, 1997, Soil/Source Operable Unit of Seven Study Areas only.

ROD-OU3
Signed: May 19, 2000, Y-Line Facility Soils

Remedies:
- Incineration of site wastes at Area P (responsibility of the U.S. Army).
- No further action for the seven soil/source study areas.
- No further action for the Y-Line Facility soils.

Community Involvement

- Community Involvement Plan: 07/88, revised 09/88 and 08/96.
- Community Involvement activities are the responsibility of the U.S. Army with oversight by EPA and LDEQ per the Federal Facility Agreement.
- Milestone Fact Sheets: 02/90.
- Citizens on site mailing list: 76
- Constituency Interest: Unconcerned
- Site Repository: Louisiana Army Ammunition Plant Environmental Office, Webster Parish Public Library

Technical Assistance Grant

- Availability Notice: 03/24/89
- Letters of Intent Received: None
- Grant Award: N/A
- No apparent interest in a TAG at this site

Contacts

- **Remedial Project Manager(s):** Caroline Ziegler, 214-665-2178, EPA (6SF-LP)
- **State Contact:** Duane Wilson, (225)765-0463, Louisiana Dept. of Environmental Quality
- **Community Involvement:** Caroline Ziegler, 214-665-2178, EPA (6SF-LP)
- **Attorney:** Mike Barra, 214-665-2143, EPA (6SF-DL)
- **State Coordinator:** Don Williams, 214-665-2197, EPA (6SF-LT)
- **EPA Contractor:** none
- **Prime Contractor:** Engineering Technologies Associates, Inc. (ETA), Program Management Company (PMC)

Enforcement

- Enforcement Options: Continued oversight; Interagency Agreement (Three-Way Federal Facility Agreement - January 1989); Yellow book procedure

Present Status and Issues

! Both ground water and soil data is currently undergoing quality assurance and quality control as well as data validation in support of the remaining operable units, which are the load, assemble and pack lines as well as test areas for soils and the site wide ground water.

! There is a Risk Assessment Management Plan the purpose of which is to streamline the work that remains in the ecological and human health risk assessments for the sitewide groundwater and the load/assemble/pack and test areas.

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Benefits

! The incineration of wastes and contaminated soils at the Louisiana Army Ammunition Plant site reduced the potential for exposure to hazardous substances for site workers and future reuse of the property. The Army is conducting investigations, which will lead to further reductions in contaminants, thereby further protecting the public health and the environment.